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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
HUYNH, SON P	
ART UNIT	PAPER NUMBER
2611	7

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/164,427	AFSHARY ET AL.	
	Examiner	Art Unit	
	Son P Huynh	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 September 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7,9-12 and 25-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-5,7,9-12 and 25-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 September 1998* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 09/09/2002 have been fully considered but they are not persuasive.

Applicant argues, " universal client interface adapter, as claimed in the present invention, is not possible in McArthur" (page 9, lines 28-29). Applicant further argues "McArthur fails to teach a carrier modulated digital signal as disclosed in claim 1 of the presently claimed invention." (Page 10, lines 4-5). In addition, Applicant argues McArthur does not teach, "processing the digitized data within the first universal client interface adapter into a carrier modulated digital signal having a signal operating frequency that is greater than a signal cut off frequency defined for conventional coaxial cable services." (Page 10, line 23-page 11, line 3).

It is noticed that the "universal client interface adapters" being claimed is just an interface adapter used "in communication with as least one client and in communication with as least one other universal client interface adapter." McArthur teaches LAN interface 26 and tap-off 12 in communication with PC 2 and in communication with another tap-off 12 and LAN interface 30 (see figure 1). Thus, McArthur teaches the "universal client interface adapter" being claimed. McArthur further discloses a

frequency-shift keying (FSK) encoding scheme is utilized for the baseband digital information; however, other encoding schemes as possible. For example, quadrature amplitude modulation (QAM) or a simple one volt peak-to-peak digital signal are possible alternatives to FSK (see col. 4, lines 40-45). Therefore, McArthur teaches a carrier modulated signal. It is also noticed that McArthur discloses PC 16 provides video information to modulator 120 via PCI bus 90 and the video can be modulated onto any of the eight local video channels SN1 through SN1. The modulated video is then provided to the network 1. PC16 also provides bidirectional communication of baseband digital to PCI 90 and then is transmitted to network 1 (see figure 7 and col. 8, lines 6-43); and a frequency-shift keying (FSK) encoding scheme is utilized for the baseband digital information; however, other encoding schemes as possible. For example, quadrature amplitude modulation (QAM) or a simple one volt peak-to-peak digital signal are possible alternatives to FSK (see col. 4, lines 40-45). Therefore, McArthur teaches "processing the digitized data within the first universal client interface adapter into a carrier modulated digital signal having a signal operating frequency that is greater than a signal cut off frequency defined for conventional coaxial cable services." Hence, the claims are rejected as follow.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1 –5, 7 and 25-29, 33 are rejected under 35 U.S.C. 102(e) as being anticipated by McArthur (US 5,805,806).

Regarding claim 1, McArthur discloses a digital coaxial cable local area network (LAN) supports both baseband digital LAN signals and video comprising:

a plurality of clients (clients 14-22) (see figure 1);

a plurality of "universal client interface adapters" wherein the combination of tap 12 and interface reads on the adapter being claimed; one "universal client interface adapter" in communication with at least one client and in communication with at least one other "universal client interface adapter" and coaxial cable 15 couple between a pair of "universal client interface adapters", coaxial cable 15 having an operating frequency spectrum, the operating frequency spectrum having at least a first portion and second portion, the second portion (third band) operating at a frequency greater than a signal cut-off frequency defined for conventional coaxial cable services (see figures 1, 12 ; col. 2, line 58- col. 3, line 11; col. 4, lines 15 –39, col. 10, line 29- col. 11, line 60). McArthur also discloses PC 16 provides video information to modulator 120 via PCI bus 90 and the video can be modulated onto any of the eight local video channels SN1 through SN1. The modulated video is then provided to the network 1. PC16 also provides bidirectional communication of baseband digital to PCI 90 and then is transmitted to

network 1 (see figure 7 and col. 8, lines 6-43); and a frequency-shift keying (FSK) encoding scheme is utilized for the baseband digital information; however, other encoding schemes as possible. For example, quadrature amplitude modulation (QAM) or a simple one volt peak-to-peak digital signal are possible alternatives to FSK (see col. 4, lines 40-45). Therefore, McArthur teaches carrier modulated digital signal having a signal operating frequency that occupied the second portion of the operating frequency spectrum of the coaxial cable, the carrier modulated digital signal transmitted in the coaxial cable coupled between the pair of "universal client interface adapters."

Regarding claim 2, McArthur discloses at least one of the plurality of "universal client interface adapters" is integrated into a client of the cable LAN (see figure 1 or figure 12).

Regarding claim 3, McArthur discloses the at least one signal is an in-home signal and the coaxial cable is taped off a public cable network via jack 8 (see figures 1, 7 and figure 12 and col. 4, lines 40-45; col. 8, lines 6-43).

Regarding claim 4, McArthur discloses the cable LAN comprising low pass filter coupled upstream of the in-home signal (see figure 5 and col. 7, lines 12 – 55).

Regarding claim 5, McArthur discloses the low pass filter having a cut off frequency less than 1000 MHz (see col. 7, lines 40-55).

Regarding claim 7, McArthur discloses a cable LAN as discussed in the rejection of claim 1. McArthur further discloses the cable LAN comprising a low pass filter coupled upstream of the in home signal to a public cable network, wherein the carrier modulated digital signal is generated downstream of the low pass filter(see figures 5 and 7, col. 2, line 15 – col. 3, line 67).

Regarding claim 25, McArthur teaches a method for communicating data between a "first universal client interface adapter" and a "second universal client interface adapter" coupled by coaxial cable 15, the method comprising:
receiving digitalized data in the "first universal client interface adapter" from a client (PC16);
processing the digitized data within the "first universal client interface adapter" into a carrier modulated signal having a signal operating frequency that is greater than a signal cut-off frequency defined for conventional coaxial cable services; and
communicating the carrier modulated signal from the "first universal client interface adapter" to the "second universal client interface adapter" through coaxial cable 15 (see figures 7, 12, col. 8, lines 6-43; col. 10, line 28 – col. 11, line 60).

Regarding claim 26, McArthur discloses in response to the person's input via the wireless keyboard 222, the NTSC video output by PC 16 is modulated onto channel 2, where it is received by the tuner in TV interface 34 and displayed on television 18 (see

col. 11, lines 27-42). Inherently, the digitalized data is modulated into an analog form; the modulated data is converted into an analog signal having an intermediate frequency; the intermediate frequency is increased to a frequency that is greater than the data operating frequency (channel SN 2); and the power is amplified for transmitting and displaying the signal the signal on the television 18.

Regarding claim 27, McArthur teaches a digital coaxial cable LAN as discussed in the rejection of claim 1. McArthur further discloses frequency band from 750MHz to 800 MHz is used for remodulated, local video originating from PCs or other devices in the network (see col. 4, lines 24-30). Therefore, McArthur teaches the carrier modulated digital signal operating frequency is greater than approximately 450 MHz.

Regarding claim 28, the limitations of the cable LAN correspond to the limitations of the method being claimed in claim 25 and are analyzed as discussed in the rejection of claim 25.

Regarding claim 29, McArthur discloses frequency band from 750MHz to 800 MHz is used for remodulated, local video originating from PCs or other devices in the network (see col. 4, lines 24-30). Therefore, McArthur teaches the carrier modulated digital signal operating frequency is greater than approximately 450 MHz.

Regarding claim 33, McArthur teaches a cable LAN as discussed in the rejection of claim 28. McArthur further teaches the normal coaxial cable system transmits signals external to the cable LAN (see figures 1 and 12).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 9-12, 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over McArthur (US 5,805,806) as applied to claim 8 above, and in view of Terry (US 5,499,047).

Regarding claim 9, McArthur discloses a cable LAN as discussed in the rejection of claim 1. However, McArthur fails to disclose the carrier modulated digital signal operating frequency is greater than approximately 950 MHz.

Terry discloses control signals and possibly other data are carried in a QPSK channel providing an upstream bit rate of 300 Mb/s in a frequency range from 1150-1350 MHz (see col. 5, lines 55-60). Inherently, Terry teaches the carrier modulated digital signal operating frequency is greater than approximately 950 MHz. Therefore, it

would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McArthur to utilize the carrier modulated digital signal operating frequency is greater than approximately 950 in order to increase signal transmission in the LAN system.

Regarding claim 10, Terry discloses control signals and possibly other data are carried in a QPSK channel providing an upstream bit rate of 300 Mb/s in a frequency range from 1150-1350 MHz (see col. 5, lines 55-60). Therefore, Terry teaches the carrier modulated digital signal operating frequency is between 950 MHz and 2000MHz.

Regarding claim 11, Terry discloses the carrier modulated digital signal operating frequency is range 1150-1350 MHz as discussed in the rejection of claim 10 which is approximately 1300 MHz.

Regarding claim 12, Terry discloses the carrier modulated digital signal operating frequency has a bandwidth of at least 5 MHz (see figure 2 or 3).

Regarding claim 30, McArthur discloses a cable LAN as discussed in the rejection of claim 28. However, McArthur fails to disclose the carrier modulated digital operating frequency is greater than approximately 950 MHz.

Terry discloses control signals and possibly other data are carried in a QPSK channel providing an upstream bit rate of 300 Mb/s in a frequency range from 1150-1350 MHz (see col. 5, lines 55-60). Inherently, Terry teaches the carrier modulated digital signal operating frequency is greater than approximately 950 MHz. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McArthur to utilize the carrier modulated digital signal operating frequency is greater than approximately 950 in order to increase signal transmission in the LAN system.

Regarding claim 31, McArthur discloses a cable LAN as discussed in the rejection of claim 28. However, McArthur fails to disclose the carrier modulated digital operating frequency is approximately 1300 MHz.

Terry discloses control signals and possibly other data are carried in a QPSK channel providing an upstream bit rate of 300 Mb/s in a frequency range from 1150-1350 MHz (see col. 5, lines 55-60). Inherently, Terry teaches the carrier modulated digital signal operating frequency is approximately 1300 MHz. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McArthur to utilize the carrier modulated digital signal operating frequency is approximately 1300 MHz in order to increase signal transmission in the LAN system.

Regarding claim 32, McArthur discloses a cable LAN as discussed in the rejection of claim 28. However, McArthur fails to disclose the carrier modulated digital has a bandwidth of at least 5MHz.

Terry discloses the carrier modulated digital signal has a bandwidth of at least 5 MHz (see figure 2 or 3). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McArthur to incorporate the feature as taught by Terry in order to expand capabilities of cable LAN.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Coutinho (US 5,760,822) discloses frequency shifting the transmission signals generated by the transmitting terminal devices to a center frequency outside of the cable television bandwidth, i.e. to a center frequency greater than 450 MHz. By modulating each terminal device with a modulator and controller 222 so that the generated signal does not occupy frequency components in the available cable television bandwidth interference, interference with available cable stations transmitted by the cable provider is avoided (see col. 5, line 60-col. 6, line 3).

Lakhani (US 5,539,880) discloses cable based interactive multimedia workstation network.

Humpleman (US 6,005,861) discloses home multimedia network architecture.

Naiff (US 5,982,363) discloses personal computer based set-top converter for television service.

Decker et al. (6,167,443) discloses entertainment and information system and related management networks for remote video delivery system.

Tomich et al. (US 5,983,068) discloses photonic home area network.

Smith et al. (US 6,219,409) discloses premises gateway and premises network interfaces.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son P Huynh whose telephone number is 703-305-1889. The examiner can normally be reached on 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached on 703-305-4380. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is 703-306-0377.

Son P. Huynh
November 26, 2002

VIVEK SRIVASTAVA
PATENT EXAMINER